

8EHQ. 1296-13828



DuPont Central Research
and Development

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and Development
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December 11, 1996

RECEIVED
DEC 16 1996

DEC 16 1996 11:30

Document Processing Center (TS - 790)
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U. S. Environmental Protection Agency
401 M Street S.W.
Washington, D.C. 20460

Contains No CBI



8EHQ-96-13828

Dear 8(e) Coordinator:

Dichloropropionitrile
CAS Number 2601-89-0

DEC 16 1996 11:30

RECEIVED
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This letter is to inform you of the results of two inhalation studies in rats with 1,2-dichloropropionitrile (DCPN), a single exposure lethality study and a one week subacute study. In the first study, six rats were exposed nose-only for four hours to a mean concentration of 48 ppm of DCPN. Following the exposure, clinical signs of toxicity observed in some rats included labored breathing, lung noise, gasping, and lethargy. Rats had slight to severe weight loss the day following exposure. Two of six rats died within one day after exposure and one rat was sacrificed in extremis.

In the repeat exposure study, groups of ten male rats were exposed, nose-only, for six hours/day for a total of five exposures to concentrations of approximately 0.2, 2, or 10 ppm of DCPN. A control group of ten male rats was exposed simultaneously to air. An additional group of 10 rats was exposed to approximately 2 ppm of DCPN for four days. At the end of the exposure period, five rats per group were sacrificed for pathologic examination. After a two-week recovery period, the surviving rats in each group were also sacrificed for pathologic examination.

During the exposure period there was a depressed rate of body weight-gain in the 10 ppm group. Immediately after the last exposure, histologic examination showed dose-related nasal lesions in rats exposed to 10 or 2 ppm of DCPN. The 10 ppm group showed ulceration of the nasal respiratory epithelium. In addition there was mild hyperplasia/squamous metaplasia



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CSRAD/OPPT
2/18/97
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observed in the nasal respiratory epithelium and degeneration/regeneration of the olfactory epithelium in both the 10 ppm and 2 ppm groups. After a two-week recovery period, there was only minimal hyperplasia/squamous metaplasia observed in the nasal respiratory epithelium in the 10 and 2 ppm rats. No effects or lesions were observed in the 0.2 ppm group.

The effects described above are being reported in accordance with the guidance given in the EPA TSCA Section 8(e) Reporting Guide (June, 1991).

Sincerely,

A handwritten signature in black ink, appearing to read "A. Michael Kaplan", with a long horizontal flourish extending to the right.

A. Michael Kaplan, Ph.D.

Manager

Regulatory Affairs

AMK/DPK:jat
(302) 366-5260

Triage of 8(e) Submissions

Date sent to triage: 3/4/97

NON-CAP

CAP

Submission number: 13828 A

TSCA Inventory:

Y

N

(D)

Study type (circle appropriate):

Group 1 - Gordon Cash (1 copy total)

ECO

AQUATO

Group 2 - ~~Ernie Falke~~ (1 copy total)

~~**ATOX**~~

~~**SBTOX**~~

SEN

w/NEUR

Group 3 - HERD (1 copy each)

STOX

CTOX

EPI

RTOX

GTOX

STOX/ONCO

CTOX/ONCO

IMMUNO

CYTO

NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

- ☐ This is the **original** 8(e) submission; refile after triage evaluation.
- ☐ This **original** submission has been **split**; rejoin after triage evaluation.
- ☐ Other:

Photocopies Needed for Triage Evaluation

entire document: 0 1 2 3

front section and CECATS: 0 1 2 3

Initials: _____

Date: _____

CLC/AT/STRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA: Submission # 8EHQ 1296-13828 SEQ A

TYPE INT SUPP FLWP

SUBMITTER NAME: _____

DuPont Central Research
and Development

SUB. DATE: 12-11-96 OTS DATE: 12-16-96 CSRAD DATE: 2-18-97

CHEMICAL NAME: _____

1,2-Dichloropropionitrile
(DCPN)

CASE

2601-89-0

11

INFORMATION REQUESTED: FLWP DATE

- 0501 NO INFO REQUESTED
- 0502 INFO REQUESTED (TECH)
- 0503 INFO REQUESTED (VOL ACTIONS)
- 0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:

- 0639 REFER TO CHEMICAL SCREENING
- 0678 CAP NOTICE

VOLUNTARY ACTIONS

- 0401 NO ACTION REPORTED
- 0402 STUDIES PLANNED IN FUTURE
- 0403 NOTIFICATION OF WORK IN PROGRESS
- 0404 LABELING STUDIES (TANGIBLE)
- 0405 PROCESSING IN PROGRESS (TANGIBLE)
- 0406 APP USE DISCONTINUED
- 0407 PRODUCTION DISCONTINUED
- 0408 CONFIDENTIAL

INFORMATION TYPE:	P F C	INFORMATION TYPE:	P F C
0201 ONCO (HUMAN)	01 02 04	0241 IMMUNO (ANIMAL)	01 02 04
0202 ONCO (ANIMAL)	01 02 04	0242 IMMUNO (HUMAN)	01 02 04
0203 CELL TRANS (IN VITRO)	01 02 04	0243 CHEMPHYS PROP	01 02 04
0204 MUTA (IN VITRO)	01 02 04	0244 CLASTO (IN VITRO)	01 02 04
0205 MUTA (IN VIVO)	01 02 04	0245 CLASTO (ANIMAL)	01 02 04
0206 REPRO/TERATO (HUMAN)	01 02 04	0246 CLASTO (HUMAN)	01 02 04
0207 REPRO/TERATO (ANIMAL)	01 02 04	0247 DNA DAMAGE/REPAIR	01 02 04
0208 NEURO (HUMAN)	01 02 04	0248 PRODUSE/PROC	01 02 04
0209 NEURO (ANIMAL)	01 02 04	0251 MSDS	01 02 04
0210 ACUTE TOX (HUMAN)	01 02 04	0259 OTHER	01 02 04
0211 CHR TOX (HUMAN)	01 02 04		
0212 ACUTE TOX (ANIMAL)	01 02 04		
0213 SUB ACUTE TOX (ANIMAL)	01 02 04		
0214 SUB CHRONIC TOX (ANIMAL)	01 02 04		
0215 CHRONIC TOX (ANIMAL)	01 02 04		

USE

PRODUCTION

TOXICOLOGICAL CONCERN:

SPECIES

ONGOING REVIEW

NON-CBI INVENTORY

TRIAGE DATA

LOW

Rat

YES (DROP/REFER)

YES

MED
HIGH

NO (CONTINUE)

NO

REFER

IN PROGRESS

10054512